

### **Abstract of the Disclosure**

Newly identified mammalian taste-cell-specific G protein-coupled receptors which function as hetero-oligomeric complexes in the sweet taste transduction pathway, and the genes and cDNA encoding said receptors are described. Specifically, T1R G protein-coupled receptors active in sweet taste signaling as hetero-oligomeric complexes, and the genes and cDNA encoding the same, are described, along with methods for isolating such genes and for isolating and expressing such receptors. Methods for identifying putative taste modulating compounds using such hetero-oligomeric complexes also described, as is a novel surface expression facilitating peptide useful for targeting integral plasma membrane proteins to the surface of a cell.